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The Impact of Business Diversification on the Stable Income of the Shipping Industry: Taking China Merchants Group (601872) as an Example

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Abstract

As a primary means of global trade commodity exchange, maritime shipping has experienced fluctuating profitability in recent years because of frequent incidents and economic challenges. Many maritime companies with highly concentrated operations face significant profit volatility in complex international markets. This study examines China Merchants Energy Transportation Co., Ltd. through two analytical lenses—profit fluctuations and capital efficiency—to analyse its tanker, dry bulk, container, and roll-on/roll-off (ro/ro) transportation operations. The research investigates whether business diversification can mitigate profit volatility, aiming to increase maritime enterprises' resilience against market cycles and risks. The findings indicate that diversified business portfolios positively influence an enterprise's cyclical adaptability.

Keywords

business diversification, smooth profit fluctuation, ocean transportation

1. Introduction

Over the past five years, frequent geopolitical conflicts and emerging economic challenges have significantly impacted the profits of maritime industry enterprises. The Russia–Ukraine conflict, the most severe geopolitical event in Europe since the Cold War, has notably reshaped global maritime patterns (Yang, 2022). Amid ongoing U.S.–China trade disputes, the negative effects on shipping markets persist regardless of both sides' tariff policies (Meng et al., 2023). The severity of the impacts on maritime companies correlates with their operational type. Geopolitical conflicts escalate regional transportation risks, directly affecting the global crude oil supply (Monge et al., 2017, Wang et al., 2021). The COVID-19 pandemic disrupted supply chains, causing China's economy to suffer from supply chain disruptions, reduced vessel availability, and delayed order deliveries (Fu and Jian, 2024). Since the Russia–Ukraine conflict began, some crude oil export ports have suspended operations, and certain shipping routes have reduced in volume (Behnassi and El Haiba, 2022). In recent years, escalating global inflation has created significant spillover effects from external factors such as rising inflation levels on international dry bulk shipping rate fluctuations (Wang et al., 2023).

The shipping industry experiences asynchronous cyclical fluctuations across its diverse operations, with varying impacts from different factors. This raises the following question: Can diversifying maritime transport services help stabilize profitability? To address this, we examine China Merchants Energy Transportation Co., Ltd. (Stock Code: SH.601872), a company with diversified operations spanning crude oil, container, and dry bulk shipping. By comparing its core business segments with those of other major domestic shipping firms, this study analyses net profit volatility and capital efficiency, offering actionable insights to enhance the operational stability of industry peers.

2. Differentiation Analysis of the Enterprise Transportation Business

2.1 Shipping Business Analysis

China Merchants Shipping operates with dual core businesses in oil and gas transportation and dry bulk shipping, complemented by supplementary services, including container shipping and road-rolling cargo. Its business portfolio demonstrates clear strategic positioning with comprehensive market coverage and diverse cargo sources. The tanker division consistently adopts a market-driven approach, implementing the "Global Routes, Diversified Clients, Specialized Services" strategy. The dry bulk division focuses on cost-efficient fleet development and capacity optimization. The container division provides multimodal transport solutions, striving to become the "Pioneer of Digitalized One-Stop Premium Shipping Services in Asia". The competitive edge of a company stems from its diversified business portfolio, which balances stability with flexibility, aiming to build a sustainable shipping platform with growth potential and cyclical resilience. As shown in Table 1, since launching its container business in 2021, the company has achieved balanced revenue distribution across all segments, with its business portfolio becoming increasingly diversified.

Table 1: Revenue ratio of each business of China Merchants Shipping

Name of operation	2024	2023	2022	2021	2020
Tanker transportation	35.68%	37.37%	39.58%	46.58%	47.32%
Bulk carrier transportation	30.78%	27.47%	23.95%	22.58%	39.50%
container transport	21.06%	21.40%	23.66%	15.75%	0.00%
Roll-on/roll-off shipping	7.12%	7.58%	6.25%	6.30%	6.62%

Source: Annual Report

From 2014 to 2016, China Merchants Shipping set its strategic goal as "to build a world-class shipping enterprise with strong core competitiveness and become a stable-profit integrated shipping and related service provider." From 2017--2020, the company focused on consolidating its leading position in the VLCC and VLOC fleets. Since 2021, continuous optimization of its "2+N" business structure has been proposed, centering on oil and gas and dry bulk cargo as dual cores to establish a cyclical-resistant growth-oriented shipping platform. While seeking development opportunities, the company emphasizes enhancing internal growth capabilities. Since its IPO, China Merchants Shipping has gradually shifted from dual-core operations to diversified business models. Recent five-year annual report data show that this diversification strategy is progressively materializing.

2.2 Business Analysis of COSCO Shipping Holdings

COSCO Shipping Holdings focuses on container shipping as its core business to build a global digital supply chain operation and investment platform, primarily comprising container operations and terminal operations. The company's container business ranks first in China in scale, developing around "global layout, differentiated services, and upstream/downstream integration." Its terminal operations adopt a "global layout" as the core development strategy to support the company's global platform construction. The company aims to establish an integrated supply chain operation system that combines "container shipping + ports + related logistics," refine the "investment + construction + operation" integrated development model, and build a world-class digital supply chain enterprise centered on container shipping. As shown in Table 2, COSCO Shipping Holdings' container shipping business accounts for more than 95% of revenue, whereas terminal operations contribute less than 5% of operating income. This highly concentrated revenue structure poses significant risks.

Table 2: Revenue ratio of COSCO Shipping Holdings' businesses

name	2020	2021	2022	2023	2024
Container shipping operations	96.93%	98.27%	98.20%	95.83%	96.63%
wharfage	4.09%	2.38%	2.51%	5.93%	4.62%

Interdepartmental offsetting	-1.03%	-0.65%	-2.52%	-1.75%	-1.25%

Source: Annual Report

2.3 Business analysis of Nanjing Tanker Corporation

The NanJing Tanker Corporation specializes in liquid cargo transportation, focusing on its core strengths in refined oil products, crude oil, chemicals, and gas transport. The company has expanded into related sectors such as crew services, striving to establish a business framework characterized by "synergy among oil, chemical, and gas sectors, dual operation of domestic and international markets, direct river–sea–waterway connectivity, and differentiated development." This strategy enhances the company's core competitiveness, risk resilience, and cyclical adaptability, positioning it as a global leader in small-to-medium vessel liquid cargo transportation services. As shown in Table 3, the company's main operations include liquid transportation, with oil product transport, fuel supply, and chemical trade accounting for more than 80% of revenue. Chemicals and ethylene transportation contribute more than 10%, whereas nonliquid transportation businesses account for less than 5% of total revenue, demonstrating concentrated business distribution.

Table 3: Revenue ratio of each business of NanJing Tanker Corporation

Name of operation	2020	2021	2022	2023	2024
Oil transportation	78.92%	73.60%	80.62%	84.30%	57.92%
Gas supply and chemicals trading business	7.82%	11.89%	7.88%	7.08%	28.82%
Chemical transport	7.70%	8.38%	6.74%	3.55%	7.20%
Ethylene transportation	3.01%	3.19%	2.65%	2.90%	3.07%
Crew hire	2.18%	2.80%	1.92%	2.10%	2.28%
Other operations	0.07%	0.05%	0.09%	0.06%	0.67%
husbandage	0.03%	0.09%	0.11%	0.02%	0.04%
Liquefied gas transport	0.26%				

Source: Annual Report

2.4 Business Differentiation Analysis

China Merchants Shipping operates diverse maritime transport services with diverse revenue streams and a wide range of vessel models. In contrast, COSCO Shipping Holdings and China Merchants South Oil have more focused operations with concentrated revenue sources. The company has implemented its "Continuous Optimization of the '2+N' business layout" strategy to diversify operations, achieving notable progress. COSCO Shipping Holdings, while pursuing global expansion and building an integrated supply chain system that combines container shipping, ports, and logistics, has yet to demonstrate significant results according to current data. China Merchants South Oil remains dedicated to liquid transportation, with its current focus on the "synergistic development of oil, chemicals, and gas."

3. Company Financial Comparison Analysis

3.1 Overall Gross Margin Comparison Analysis

Descriptive statistics of the gross profit margins over the past decade for the three companies (as shown in Table 4) reveal that China Merchants Shipping's average gross margin stands at 25.3%, surpassing both COSCO Shipping Holdings Limited (21.3%) and COSCO Shipping (15.5%). Moreover, China Merchants Shipping's gross margin variance of 0.0763 is lower than that of China Merchants South Oil (0.1226) and COSCO Shipping Holdings Limited (0.1541). From this perspective, China Merchants Shipping demonstrates superior performance in profitability and stability compared with both COSCO Shipping Holdings Limited and China Merchants South Oil.

Table 4: Descriptive statistics of the company's gross profit rate data over the past ten years

Stats	China Merchants Shipping	COSCO Shipping Holdings	China Merchants Southern Oil
N	10	10	10

Mean	.253	.155	.213
SD	.0763108	.1524066	.1225697

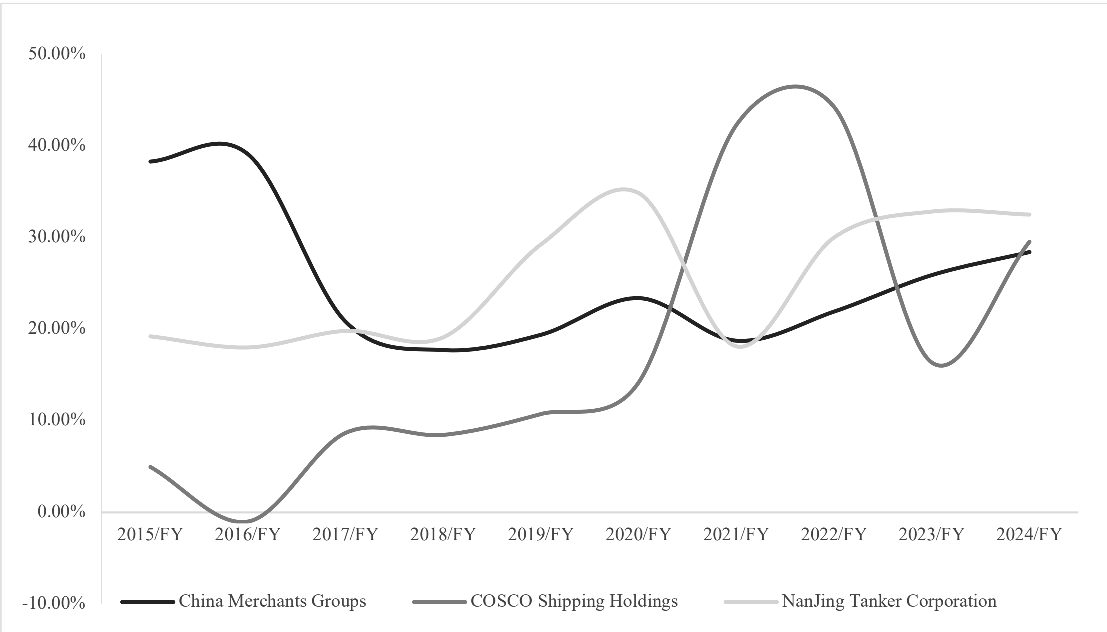
Source: Annual Report

To facilitate analysis, this study examines the causes of gross margin fluctuations over the past decade for three companies (Figure 1). For China Merchants Shipping, the 2017 gross margin decline was attributed primarily to a sharp drop in average freight rates on major VLCC routes, coupled with fleet expansion and a 26.52% cost increase due to rising marine fuel prices, which were influenced mainly by macroeconomic factors. In 2021, despite a 55.04% plunge in tanker freight revenue amid a deep market downturn, the company benefited from sustained prosperity in the dry bulk market. The dry bulk fleet's revenue increased by 59.29%, whereas container operations experienced a 55.86% year-over-year increase. These two business segments effectively offset the earnings volatility in tanker operations.

In 2022, China COSCO Shipping Holdings experienced a significant increase in gross profit, driven primarily by multiple factors, including recurring pandemic outbreaks, growing demand, and limited supply, which strained the container market. However, in 2024, intensified geopolitical conflicts, persistent localized inflationary pressures, and high interest rates in developed countries are expected to result in supply exceeding demand growth, leading to a decline in gross profit margins.

In 2020, China Merchants South Oil Company achieved gross margin growth, which was driven primarily by market recovery, carry-over effects from capacity expansion, and improved vessel efficiency, resulting in a significant increase in transportation revenue. However, the gross margin experienced a notable decline in 2022, mainly due to sustained price drops in the international tanker market, coupled with rising fuel costs and crew compensation increases that led to higher operating expenses than those in the previous year.

Figure 1: Gross margin fluctuations over the past decade



Source: Annual Report

In summary, COSCO Shipping Holdings experienced a sharp decline in gross margins after a significant increase during the pandemic due to supply–demand imbalances in transportation. China Merchants South Oil's gross margins, being closely tied to the transportation of crude oil and natural gas, which experienced volatility during the Russia–Ukraine conflict. In contrast, China Merchants Shipping benefited from diversified operations, with other business segments providing a buffer effect when its core transportation business faced challenges.

3.2 Overall Fixed Asset Turnover Analysis

To facilitate analysis, a comprehensive comparative study was conducted on the fixed asset turnover ratios of three companies—China Merchants Shipping (ZSLC), COSCO Shipping Holdings Limited (ZYHK), and China Merchants South Oil (ZSNY)—over the past decade, aiming to evaluate their asset utilization efficiency and operational stability. The report provides an in-depth interpretation on the basis of statistical tables (N=10 years) and a fixed asset turnover ratio fluctuation chart. As shown in Table 5, China Merchants Shipping presented the smallest standard deviation (0.184), indicating the lowest volatility in its fixed asset turnover ratio and remarkably stable operations. China Merchants South Oil also demonstrated relatively low stability with a similar standard deviation (0.184). COSCO Shipping Holdings Limited presented the highest standard deviation (0.923), revealing significant fluctuations in asset utilization efficiency and poor operational stability. Over the decade-long average data period, COSCO Shipping Holdings Limited's average fixed asset turnover ratio far exceeded that of the other two companies at 1.947, demonstrating the highest revenue generated per unit of fixed assets and superior operational efficiency. China Merchants South Oil averaged 0.794, indicating moderate efficiency, whereas China Merchants Shipping Holdings Limited averaged 0.48, indicating relatively lower efficiency.

Table 5: Descriptive statistics of the company's fixed asset turnover rate in the past ten years

Stats	China Merchants Shipping	China Shipping Holdings	China Merchants Southern Oil
N	10	10	10
Mean	.48	1.947	.794
SD	.184029	.9234723	.1839807

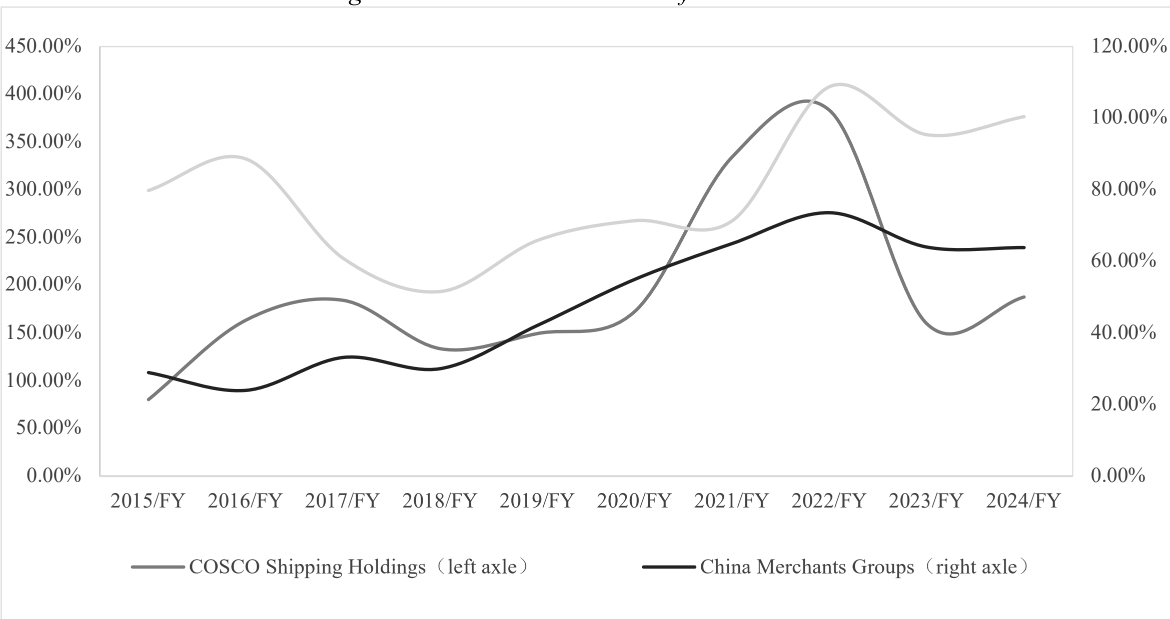
Source: Annual Report

The stable turnover rate of fixed assets of China Merchants Shipping (Figure 2) may be related to its business model. China Merchants Shipping is engaged in oil and gas transportation, dry bulk transportation, container transportation, car roll-on/roll-off transportation and other businesses, and the freight rates and demand fluctuations of various businesses are usually inconsistent.

China COSCO Shipping Corporation (CCS) experienced dramatic fluctuations in its turnover ratio, which peaked at nearly 400% during the 2022 fiscal year before plummeting. These extreme swings were closely tied to supply–demand dynamics in the global container shipping market. During the COVID-19 pandemic, supply chain bottlenecks, port congestion, and a surge in demand for transportation services drove freight rates to historic highs, exemplified by the sharp rise in the short-term freight index (SCFI). As a global leader in container shipping, CCS saw its revenue surge while maintaining relatively stable fixed assets such as vessels and containers, leading to explosive growth in its turnover ratio. However, after 2022, as global supply chains normalized, freight rates nosedived from their peak, causing revenue to plummet and resulting in a rapid decline in its fixed asset turnover ratio.

China Merchants South Oil's fixed asset turnover ratio declined in 2017, primarily due to market oversupply caused by continuous new ship deliveries, resulting in partial fleet idling. However, the ratio has increased since 2022, likely influenced by geopolitical conflicts such as the Russia–Ukraine conflict and Red Sea crisis, which have reshaped global energy trade routes. Europe has gradually halted imports of Russian refined oil products, shifting to alternative sources in the Middle East, the United States, and Asia. This significant extension of average transportation distances may have driven the rise in the fixed asset turnover ratio.

Figure 2: Fixed asset turnover rate fluctuation chart



Source: Annual Report

In summary, China Merchants Shipping benefits from business diversification and the mutual smoothing of asset utilization efficiency, resulting in a more stable fixed asset turnover ratio than that of China Merchants South Oil and COSCO Shipping Holdings. However, business diversification makes it difficult for a company to leverage scale advantages, leading to a relatively high overall idle rate.

4. Conclusions and Recommendations

4.1 Conclusions

This study starts with three companies, China Merchants Shipping, China Shipping Holdings and China Merchants South Oil, to analyse the volatility of the gross profit rate and asset turnover rate. The results show that the diversification of the transportation business in the ocean transportation industry can effectively smooth the profit fluctuations of companies and improve the stability of asset use.

4.2 Recommendations

The core strengths of shipping enterprises lie in their global network nodes (ports), robust logistics assets (vessels, containers, terminals), profound maritime expertise, and extensive customer base. Any diversified business should be built around these core strengths while adhering to the principles of feasibility and practicality.

4.2.1 Vertical Extension: Deepening the Logistics Value Chain

This transformation aims to evolve from basic “port-to-port” transportation to comprehensive supply chain solutions encompassing door-to-door and end-to-end services, which are directly extended on the basis of existing shipping routes, port partnerships, and client contracts. The transition toward integrated end-to-end logistics services now covers maritime, land, and air transportation, including customs clearance, warehousing, inland logistics, cargo consolidation, and last-mile delivery. Clients are increasingly opting for one-stop, all-inclusive solutions. Today, especially large B2B clients, complex global supply chains are increasingly being outsourced to specialized logistics partners with full-service capabilities, creating substantial market demand. This can be achieved through self-development, acquisitions, or partnerships with established land transport/warehousing companies, as exemplified by Maersk’s successful transition into a comprehensive container logistics provider.

4.2.2 Service Optimization: Professional Cold Chain Logistics

The initiative involves deploying refrigerated containers, specialized refrigerated vessels, and temperature-controlled warehouses to provide professional maritime logistics services for high-value-added goods such as food and pharmaceuticals. This optimization strategy enables the immediate utilization and expansion of existing container assets and shipping capacity through equipment upgrades while establishing specialized temperature control management processes and dedicated teams. With clearly defined technical thresholds, this represents a feasible growth opportunity. As the global middle class expands and demand for premium fresh food and pharmaceuticals increases, the market demonstrates vast potential and attractive profit margins.

4.2.3 Ship Leasing and Management Services

An independent ship leasing and asset management platform should be established. While operating its own fleet, the company leases idle vessels to other operators and provides professional technical services, including vessel management, crew dispatching, and maintenance. This new business model represents a monetization of its core operational capabilities, transforming accumulated expertise into service products with minimal reliance on additional physical assets. The strategy focuses on corporating existing operations, technology, and procurement departments through market-oriented approaches, enabling asset–light operations with stable profit margins. Currently, there remains a global demand for professional third-party management teams to increase ship operational efficiency and safety standards.

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Conflicts of Interest
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